DETAILED ACTION

Applicant's response on May, 5, 2010 to the Office Action dated February 18, 2010 is acknowledged. Applicants have cancelled claims 25-39. Applicants have amended claim 1 and added new claims 40-54. Thus claims 1-24 and 40-54 are present for examination.

Priority

Acknowledgment is made for the benefit for priority under 35 U.S.C. 119(a)-(d) from foreign application IL158053 filed on 09/22/2003 and provisional application filed under 119 (e) from 60/503,902 also filed on 9/22/2003. The certified copy has been filed in this application.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney Allan A. Fanucci on July 14, 2010.

Summary of amendments: The limitation of claim 40 was incorporated in claim 1. Therefore claim 40 is cancelled. Claims 1-5 and claim 22 were amended. Claims 1-24 and 41-54 are allowed. The amendments are as follows:

EXAMINER'S AMENDMENT

Amend claim 1 as follows:

- Claim 1 (Currently Amended) A large scale process for purifying alpha-1 proteinase inhibitor (API) from an unpurified mixture of proteins comprising:
  (a) dispersing the unpurified mixture of proteins containing API in an aqueous medium; (b) removing a portion of contaminating lipids and proteins by adding a lipid removal agent to the aqueous dispersion and precipitating the portion of contaminating proteins from said aqueous dispersion;
  (c) loading an API-containing supernatant of step (b) containing API on a first anion exchange resin with a buffer solution having pH and conductivity such that API is retained on the first anion exchange resin;
  (d) eluting an API-containing fraction from said first anion exchange resin with a same type of buffer as in step (c) having adjusted pH and conductivity;
  (e) loading an API-containing fraction of step (d) on a cation exchange resin in said same type of buffer having appropriate pH and conductivity such that API is not retained on the cation exchange resin;
  (f) collecting a flow-through of step (e) that contains API;
  (g) loading an API-containing fraction of step (f) on a second anion exchange resin with said same type of buffer having appropriate pH and conductivity such that API binds to the second anion exchange resin; and

  (h) eluting API from said second anion exchange resin with said same type of buffer having adjusted pH and conductivity to obtain ~~a stable solution containing purified, active API~~ a purified active API which is stable without the addition of a protein stabilizer.

- Claim 2, 3 and 5 delete the recitation of the term "obtained"
- Claim 4 delete the recitation "solution"

- Amend claim 22 and 23 as follows:

22. (Amended) The process of claim 1, further comprising changing the ionic composition of the solution containing the purified, active API to contain a physiologically compatible ion and sterilizing the resulted solution.

23. The process of claim 22, wherein the solution containing API is concentrated before **loading on** the ion exchange **resin**.

Cancel claim 40.

Conclusion: Claims 1-24 and 41-54 are allowed.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: Above claims have been allowed based on the applicant's argument that the above method can be used for large scale purification of API wherein said purified API is highly stable in solution without addition of a protein stabilizer, which was unexpected, comprising purifying the API in an anion exchange resin, a cation exchange resin followed by a second anion exchange resin is not or rendered obvious anticipated by the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAGNEW H. GEBREYESUS whose telephone number is (571)272-2937. The examiner can normally be reached on 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MANJUNATH RAO can be reached on 571-272-0939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kagnew H Gebreyesus/
Acting Examiner of Art Unit 1656
July 14, 2010

/Manjunath N. Rao /
Supervisory Patent Examiner, Art Unit 1656